REMARKS

This Application has been carefully reviewed in light of the Final Office Action mailed February 22, 2006. In order to advance prosecution of this case, Applicants amend Claims 1, 10-12, and 14. Applicants previously canceled Claims 2-3, 6-7, and 18-19 without prejudice or disclaimer. Applicants respectfully request reconsideration and favorable action in this case.

Section 102 Rejections

The Examiner rejects Claims 1, 4-5, and 10-17 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,398,196 issued to Chambers ("*Chambers*"). Applicants respectfully traverse this rejection. Nonetheless, for the purposes of advancing prosecution, Applicants amend 1, 10-12, and 14 to further clarify the claimed invention. As amended, Claim 1 recites:

> A method of detecting viral code in subject files, comprising:
> creating an artificial memory region spanning one or more components of the operation system;
> creating a custom version of an export table, wherein the custom version of the export table is associated with a plurality of entry points and wherein the entry points comprise predetermined values;
> emulating execution of at least a portion of computer executable code in a subject file;
> monitoring operating system calls by the emulated computer executable code;
> identifying a type of operating system call that the emulated computer executable code attempted to access; and
> deciding, based on the type of operating system call identified, whether the emulated computer executable code comprises viral code.

Chambers fails to recite, expressly or inherently, every element of amended Claim 1 for at least several reasons. First, *Chambers* fails to disclose "identifying a type of operating system call that the emulated computer executable code attempted to access." Second, *Chambers* also fails to disclose "deciding, based on the type of operating system call identified, whether the emulated computer executable code comprises viral code." Thus, as described further below, *Chamber* fails to recite every element of amended Claim 1.

First, *Chambers* fails to disclose "identifying a type of operating system call that the emulated computer executable code attempted to access." The cited portion of *Chambers* states only that "the monitor program examines a list of operating system entry points to

determine if any have changed as a result of the instruction just emulated" and that "[i]f there is such a change, then it is logged at block 820." Col. 9, ll. 21-23, 25-26. *Chamber* does not, however, disclose "identifying *a type of operating system call* that the emulated computer executable code attempted to access" (emphasis and underlining added) as recited by Claim 1.

Second, *Chambers* also fails to disclose "deciding, based on the type of operating system call identified, whether the emulated computer executable code comprises viral code." The only decision made by the monitoring module described in the cited portion of *Chambers* is whether "any [operating system entry points] have changed as a result of the instruction just emulated." Col. 9, ll. 22-23. Moreover, as noted above, *Chambers* fails to disclose identifying a type of operating system call. Thus, *Chambers* also fails to disclose "deciding, based on the type of operating system call identified, whether the emulated computer executable code comprises viral code" as recited by Claim 1.

As a result, *Chambers* fails to recite, expressly or inherently, every element of amended Claim 1. Claim 1 is thus allowable for at least these reasons. Applicants respectfully request reconsideration and allowance of amended Claim 1 and its dependents.

Although of differing scope from Claim 1, Claims 10-12 and 14 include elements that, for reasons substantially similar to those discussed with respect to Claim 1, are not recited expressly or inherently by *Chambers*. Claims 10-12 and 14 are thus allowable for at least these reasons. Applicants respectfully request reconsideration and allowance of Claims 10-12 and 14, and their respective dependents.

Additionally, many of the dependents of Claim 1 include other elements that are also not disclosed in the cited reference. For example, Claim 5 as amended recites:

> The method of claim 1, further comprising:
> monitoring accesses by the emulated computer executable code to the artificial memory region to detect looping; and
> determining based on a detection of looping whether the emulated computer executable code is viral.

Chambers fails to recite, expressly or inherently, additional elements of amended Claim 5. *Chambers* fails to disclose "monitoring accesses by the emulating computer executable code to the artificial memory region to detect looping." The portion of *Chambers* cited by the Examiner in rejecting this claim discloses use of a guinea pig file to determine whether certain viral code displays replicative behavior. Col. 10, ll. 40-43. While the cited

portion of *Chambers* references "recursion," it describes recursively executing the emulation process and merely discusses terminating emulation if viral behavior by the target program is confirmed while recursively executing the emulation. *Chambers* does not disclose "monitoring accesses by the emulating computer executable code to the artificial memory region to detect looping" as recursion is assumed to be part of this process.

Chambers also fails to disclose "determining based on a detection of looping whether the emulated computer executable code is viral." The cited portion of *Chambers* describes a process for determining whether a virus has corrupted the interrupt handlers of a computer system. More specifically, the system in *Chambers* emulates execution of a target program, and then accesses a first "guinea pig file" to determine if execution of the target program has corrupted the interrupt handlers. Col. 9, ll. 44-48; col. 9, ll. 61-64; col. 10, ll. 7-10. Following access of the first guinea pig file, the system determines whether any unauthorized modification of the first guinea pig file has occurred, i.e. whether block 960 of FIG. 9 has been reached. Col. 10, ll. 10-23. If so, the described system of *Chambers* may further test the replicative nature of the virus initiated by the target program, by executing the first guinea pig file and then accessing a second guinea pig file. Col. 10, ll. 32-40. Following access of the second guinea pig file, the system determines whether any unauthorized modification of the second guinea pig file has occurred, i.e. whether block 960 has been reached again. In other words, "if block 960 is reached during the second level of emulation, viral behavior is confirmed and the second level of emulation is terminated." Col. 10, ll. 43-50. Thus, the system of *Chambers* determines whether viral behavior has occurred based on whether a first file exposed to unauthorized modification will cause unauthorized modification of other files if the first file is later executed. *Chambers* does not however disclose "determining based on a detection of looping whether the emulated computer executable code is viral" as recited by amended Claim 5.

As a result, *Chambers* fails to recite, expressly or inherently, at least these additional elements of Claim 5. Thus, for at least these additional reasons, Claim 5 is allowable. As noted above, Applicants respectfully request reconsideration and allowance of amended Claim 5, as noted above.

Although of differing scope from Claim 5, amended Claim 17 includes elements that, for reasons substantially similar to those discussed with respect to Claim 5, are not disclosed

by the cited reference. Claim 17 is thus allowable for at least these reasons. Applicants respectfully request reconsideration and allowance of amended Claim 17, as noted above.

Section 103 Rejections

The Examiner rejects Claims 8, 9, and 20 under 35 U.S.C. § 103(a) as being unpatentable over *Chambers* in view of U.S. Patent No. 5,974,549 issued to Golan ("*Golan*"). Claims 8 and 9 depend from Claim 1, while Claim 20 depends from Claim 14. Claims 1 and 14 have been shown above to be allowable. Claims 8, 9, and 20 are thus allowable for at least these reasons. Applicants respectfully request reconsideration and allowance of Claims 8, 9, and 20.

Conclusions

Applicants have made an earnest attempt to place this case in condition for allowance. For the foregoing reasons, and for other reasons clearly apparent, Applicants respectfully request full allowance of all pending Claims. If the Examiner feels that a telephone conference or an interview would advance prosecution of this Application in any manner, the undersigned attorney for Applicants stands ready to conduct such a conference at the convenience of the Examiner.

No fees are believed to be due, however, the Commissioner is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,

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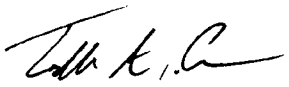

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